REMARKS

Claims 1-3, 5-12, 14-21, 23-26, and 28 are presented for further examination. Claims 1, 5, 10, 14, 20, 23, 26, and 28 have been amended. Claims 4, 13, 22, 27, and 29 have been canceled.

In the Office Action mailed April 8, 2004, the Examiner rejected claims 1-29 as anticipated by U.S. Patent No. 6,084,512 ("Elberty et al.").

Applicant respectfully disagrees with the basis for the rejection and requests reconsideration and further examination of the claims.

The present invention is directed to a distance and ranging determination method of radio frequency phase delta implemented in a radio frequency communication system for locating radio frequency tags. As described in the specification, particularly at page 8, line 17-page 9, line 10, the method of the present invention involves mixing a signal received from a transponder with a reference signal to create a mixed signal. As a result of mixing the two signals, null or peak points will occur where the two signals cancel each other out. On the basis of counting these null or peak points, a distance can be calculated between a transmitter and a radio frequency tag. Using the known distances of each of the wavelengths of the signals involved in transmission and reception, a straightforward determination of distance within a predetermined range of accuracy can be made without requiring the use of a complicated central processing unit.

Elberty et al., U.S. Patent No. 6,084,512, are directed to a method and apparatus for electronic labeling and localizing. Elberty et al. teach at column 9, lines 10-40 that comparison of a transmitted signal to a received signal that is doubled using a least-squares mathematical calculation for determining time delay, which is proportional to distance, is implemented in a central processing unit (102). This well-known method of distance finding does not require counting nulls or peaks of a mixed signal and counting the number of nulls or

peaks for distance determination. Rather, the least-squares method can compare two signals without requiring there by any null between the two signals, although it involves a more complex computational scheme that requires a CPU of higher complexity and hence cost.

Turning to the claims, claim 1 is directed to a method of radio frequency communication that, *inter alia*, compares a second signal reflected from a transponder to a reference signal generated from a phase locking of the transmitted signal by mixing the two signals and determining the number of nulls or peaks in the mixed signal. As discussed above, nowhere do Elberty et al. teach or suggest determining the number of nulls or peaks in a mixed signal in order to determine distance. Rather, Elberty et al. teach the least square method, which does not count nulls or peaks. In view of the foregoing, applicant submits that claim 1 as well as dependent claims 2, 3, and 5-9 are clearly allowable.

Independent claims 10, 20, 26, and 28 each recite mixing of a reflected or returned signal (a second signal) with a reference signal to generate a mixed signal having nulls or peaks, and then determining the number of nulls or peaks for then calculating distance. Applicant respectfully submits that these claims, as well as all claims depending therefrom, are clearly allowable for the reasons discussed above with respect to claim 1.

In view of the foregoing, applicant submits all of the claims in this case are now in condition for allowance. In the event the Examiner finds minor informalities that can be resolved by telephone conference, the Examiner is urged to contact applicant's undersigned representative by telephone at (206) 622-4900 in order to expeditiously resolve prosecution of this application. Consequently, early and favorable action allowing these claims and passing this case to issuance is respectfully solicited.

The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

Respectfully submitted,

SEED Intellectual Property Law Group PLLC

E. Russell Tarleton
Registration No. 31,800

ERT:alb
Enclosure:
Postcard

701 Fifth Avenue, Suite 6300
Seattle, Washington 98104-7092
Phone: (206) 622-4900
Fax: (206) 682-6031

130105.404 / 497246_1.DOC